

**MARINE INFORMATION****NEW PROCEDURE FOR COMPUTING TIDAL DATUMS IN AREAS OF ANOMALOUS SEA LEVEL TRENDS****COOK INLET, ALASKA****Introduction**

The current National Tidal Datum Epoch (NTDE) used by NOAA to compute accepted tidal datums at tide stations is the 1960-78 NTDE. The NTDE is updated when significant changes in sea level are found through analyses of data from stations in the National Water Level Observation Network (NWLON). The NWLON provides the basic tidal datum control for marine boundaries and for the Chart Datum of the United States. A change in mean sea level (MSL) datum of approximately 0.10ft. is considered significant in terms of NTDE updates. The last NTDE update occurred in 1980 when the epoch was changed from 1941-59 to 1960-78. Recent analyses indicate that a new NTDE period is required to supersede the present 1960-78 epoch since MSL has changed by more than 0.10 ft. at a majority of stations in the NWLON. The period of this new NTDE is expected to be 1980-98. NOAA will be performing these calculations and updating to the new NTDE over the next few years. The epoch updates are made to insure that tidal datums are the most accurate and practical for application by the navigation, surveying and engineering communities and reflect the existing local sea level conditions.

**Areas with Anomalous Sea Level Trends**

Analyses of relative sea level trends observed around the U.S. show an average change of 0.006 to 0.007 ft./yr. based on data from 61 stations over the period of 1950 through 1993. There are several geographic areas that are strongly anomalous from this average. They are northeast Texas; southeast Louisiana; portions of southeast Alaska; and Cook Inlet, Alaska. The magnitudes of the sea level trends are so large in these areas (+0.25 ft./yr. in Galveston; +0.036 ft./yr. in Grand Isle; -0.031 ft./yr. at Seldovia) that a 19-year epoch value for MSL has no meaning in a practical sense. Therefore NOAA has adopted a procedure for computing accepted tidal datums for NWLON stations in these areas based on an MSL value derived from the last several years of observations rather than a 19-year epoch value. This is necessary to ensure that the tidal datums accurately represent the existing stand of sea level. Tide ranges are still based on the 19-year NTDE. These ranges are applied to MSL to derive other tidal datums such as Mean High Water (MHW) and Mean Lower Low Water (MLLW), Chart Datum for depths shown on NOS charts. Users of products based on the old datums will find significant differences in products based on the new datums from this update. Updates will be required more frequently than every 19 years for these anomalous areas to adjust to the rapidly changing sea level.

**Impacts of Datum Changes for Cook Inlet**

The updated datums for Cook Inlet are based on an MSL datum computed from the five year period 1994-1998 and tidal ranges based on the current 1960-78 NTDE. They represent large elevation changes in the middle and lower parts of Cook Inlet and have a significant potential impact for user applications. The updated datums at Nikiski are approximately 1.0 ft. lower relative to the land than the superseded datums which were based on measurements made in the late 1970's. Similarly, at Seldovia the new datums are about 0.8 ft. lower than the old datums; and at Anchorage they are only about 0.2 ft. lower than the old ones. This change in datums is due to the combination of a number of factors including different rates of land movement throughout the area, different time series from which the old accepted datums were computed, and different control stations used to adjust the old series to the 1960-78 NTDE.

Seldovia, Nikiski and Anchorage are all control stations in NOS=NWLON and are used for datum control for subordinate tide stations in lower, middle and upper Cook Inlet respectively. New updated accepted tidal datums and published bench mark elevations are now available for Seldovia, Nikiski and Anchorage. Datums and published bench mark sheets for affected subordinate stations in Cook Inlet are being updated and will soon be available for public distribution.

There are no significant changes required to the prediction products distributed by NOAA as a result of these datum updates. However, prior to this update, observed water levels were typically biased several tenths of a foot lower than predicted water levels because the observed water levels were based on outdated tidal datums. Users will note that predicted and observed water levels will generally agree more closely during normal weather conditions after the update than previous predicted tides versus observed water levels. NOAA is integrating these datum changes into the processing of the ongoing NOAA hydrographic surveys in Cook Inlet so that the updated NOAA nautical charts for the area will contain soundings that take the new tidal datum updates into account. For hydrographic survey work and nautical charting purposes, these new datums will be applied to data collected after January 1, 1998.

**NEW EDITION OF LIST OF LIGHTS**

Pub. 112, 1999 Edition, List of Lights, Radio Aids and Fog Signals for the Western Pacific and Indian Oceans including the Persian Gulf and Red Sea, is ready for issue.

This edition contains information available to the National Imagery and Mapping Agency (NIMA) up to 7 August 1999, including Notice to Mariners No. 32 of 1999.

Corrections subsequent to the above effective date, up to and including Notice to Mariners No. 47 of 1999, are contained in Section II of this present Notice.

## NEW EDITION OF LIST OF LIGHTS (Continued)

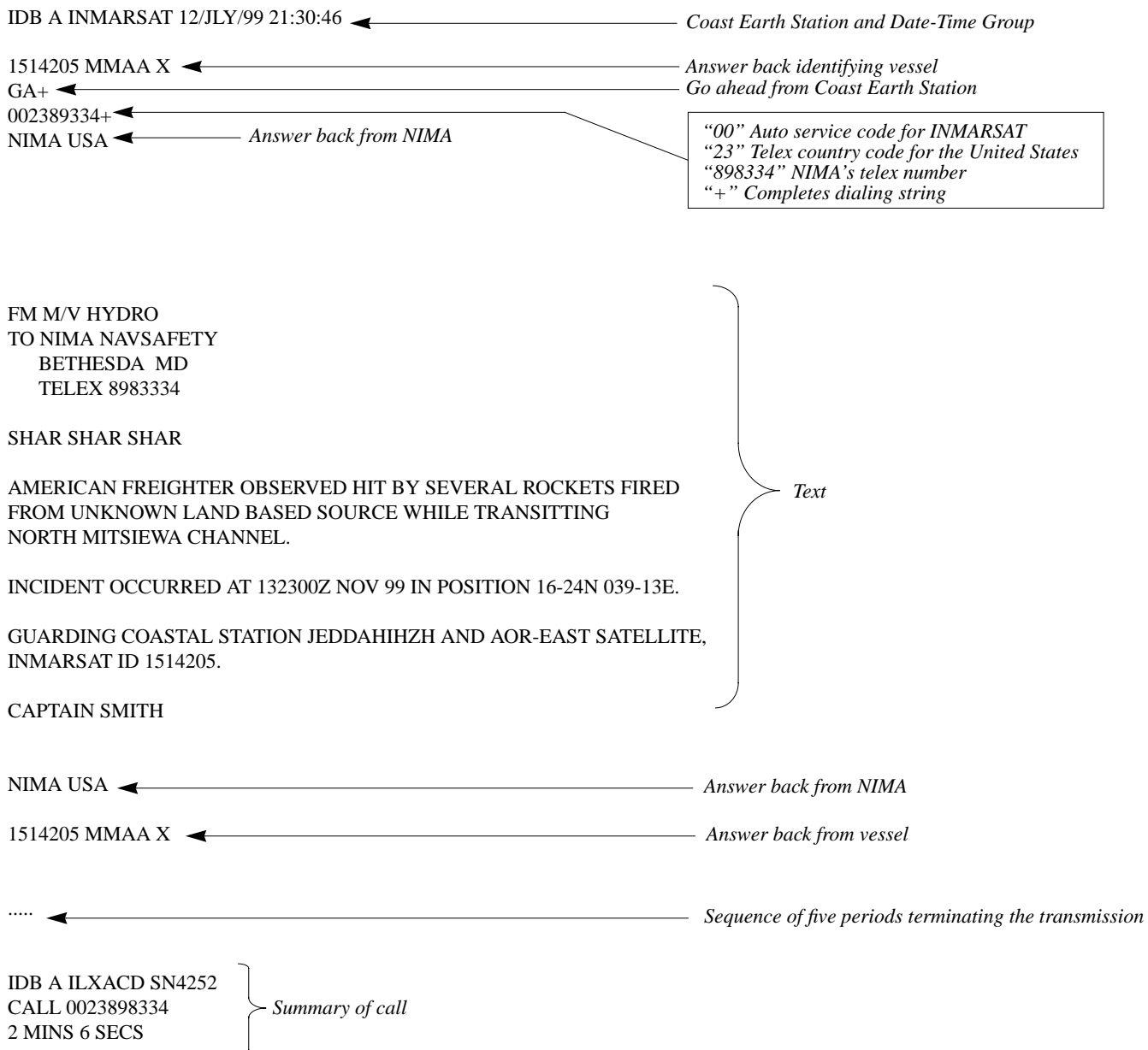
In the interval between new editions, corrective information affecting this publication will be published in the Notice to Mariners and must be applied in order to keep this publication current.

Note: Copies of the above publication may be obtained from National Ocean Service Sales Agents.

## SHIP HOSTILE ACTION REPORT (SHAR)

Rapid dissemination of a SHAR (Ship Hostile Action Report) is vital so that a radio broadcast warning, if needed, may be promulgated as soon as possible. When a SHAR is received by NIMA, it is reviewed and (if appropriate) sent to the Department of State for action. A SHAR can result in the promulgation of NAVAREAs, HYDROLANTs, HYDROPACs, and SPECIAL WARNINGS. A SHAR is not a distress message.

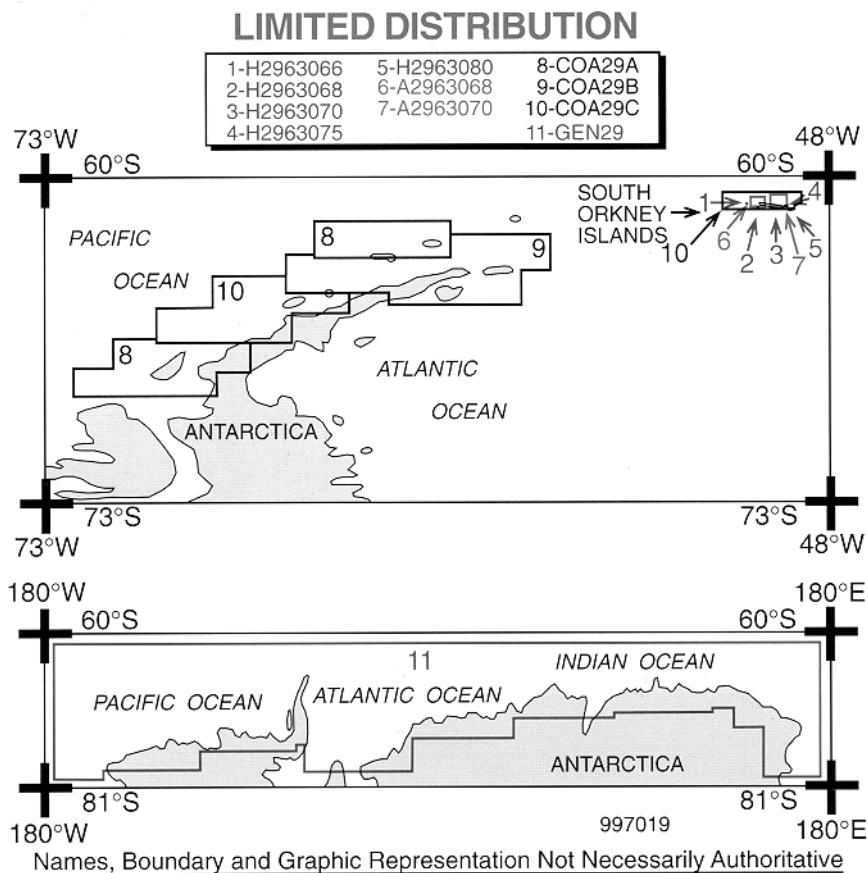
The text of a SHAR message should include the acronym SHAR, the location or position of the incident, a brief description of the situation, the INMARSAT identity of the ship transmitting the SHAR, the INMARSAT Ocean Region guarded, and the call sign of the coast radio station being guarded, if any. The following is an example of the procedure vessels can use to send a SHAR message to NIMA via either INMARSAT-A or INMARSAT-B TELEX.



**DIGITAL NAUTICAL CHART (DNC®) AVAILABILITY**

DNC® Antarctica in DNC® Geographic area 29, is ready for issue to the Department of Defense (DoD), qualified DoD contractors and U.S. Government Agencies supporting DoD functions only. This data set, which only partially covers the respective geographic area is issued solely for research, development, training and evaluation. The DNC is not authorized for use in place of paper chart for navigation, as the automatic updating service for it is still being developed. Therefore, when evaluating DNC as a navigational aid, the paper chart must be used as the primary means for ship navigation.

For detailed background on DNC®, see pages 10-42 and 10-43 of the NIMA Catalog of Maps, Charts and Related Products, Part 2-Volume 1, Nautical Charts and Publications (9th Edition, April 1998). See Section II of this Notice to Mariners for related NIMA Catalog Corrections for the DNC® data set advertised above.



This DNC® contains the following libraries(name) charts(edition)/NTM date:

H2963066(Sandefjord Bay)U.S. 29107D(2)/NTM 20/99;  
H2963068(Borge Bay)U.S. 29107F(2)/NTM 15/99;  
H2963070(Ellefsen Harbor)U.S. 29107C(2)/NTM 15/99;  
H2963075(Uruguay Cove)U.S. 29107E(32)/NTM 20/99;  
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A2963068(Approaches to Signey Island)U.S. 29107G(2)/NTM 15/99;  
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U.S. 29101(6), 29141(3), 29142(3)/NTM 19/98;  
COA29B(Brabant Island to Corry Island)  
U.S. 29105(5), 29121(5), 29128(4)/NTM 40/98;  
COA29C(Argentine Islands and South Orkney Islands)  
U.S. 29107(2), 29122(5), 29127(4)/NTM 7/99;  
GEN29(Antarctica) Int. 90(5); 211(5); 625(4); U.S. 29002(9); 29005(7);  
29008(6); 29012(8); 29015(5); 29018(4); 29022(5); 29025(3);  
29030(6)/NTM 38/98.